

IN THE DRAWINGS

The attached sheets of drawings include changes to Figs. 19 and 20. These sheets, which include Figs. 19 and 20, replace the original sheets including Figs. 19 and 20.

Attachment: Replacement Sheets

REMARKS

Favorable reconsideration of this application is respectfully requested.

Initially, applicants note three Information Disclosure Statements (IDS's) have been filed in this application and applicants submit they each have not been fully properly considered, as evidenced by the returned Forms PTO-1449 filed with those IDSs.

First, an IDS was filed with the original application papers on March 18, 2005 citing references in the "Foreign Patent Documents" section. The Office Action has not considered references AO-AR in that IDS "since English translation is not provided".¹ Applicants submit that position is improper and all the references in that IDS should have been considered since filed with that IDS was the International Search Report and a Statement of Relevancy. The filing of that International Search Report and Statement of Relevancy provide a proper basis for consideration for the references in that IDS even if an English translation is not provided. A copy of that IDS was also re-filed on April 13, 2005 again with the Statement of Relevancy. Therefore, applicants respectfully request a new Form PTO-1449 be provided for that noted IDS acknowledging consideration of each reference cited therein.

Furthermore, the Office Action returned a Form PTO-1449 for an IDS filed on May 3, 2007, but appears to inadvertently have not initialed the references AW, AX in the "Other References" section. That appears to be an oversight as no statement has been given why those references were not considered. Applicants respectfully request a new Form PTO-1449 for that IDS be provided to applicants confirming consideration of those references in the "Other References" section.

Applicants also note a further IDS was filed in this application on October 30, 2007, which at this time has not been acknowledged as considered. Applicants respectfully request

¹ Office Action of February 17, 2008, page 2, prenumbered paragraph 1.

a Form PTO-1449 for that further IDS filed October 30, 2007 be returned to applicants confirming consideration of the references therein.

Replacement Figures 19 and 20 are submitted herein that are now labeled as --Prior Art--, to address the rejection noted in paragraph 2 of the Office Action.

The specification is amended herein to correct minor informalities, and to submit a new Abstract in more proper format under United States practice, to address the objection noted in paragraph 3 of the Office Action.

Claims 1-30 are pending in this application. Claims 31 and 32 are herein canceled without prejudice. Claim 28 was rejected under 35 U.S.C. § 112, second paragraph. Claim 28 is herein amended to clarify the language therein, which is believed to address that rejection under 35 U.S.C. § 112, second paragraph. The amendments to claim 28 are believed to be clear from the original specification, see for example embodiment 5, Figure 16, and at page 54, lines 6-22. As noted in that portion in the specification, a non-voltage region is not applied any voltage as it has no pixel electrode provided thereon. Although the application of a voltage to a LCD layer utilizes a pixel electrode and an opposed electrode opposed to each other, such a configuration is realized adjacent to a non-voltage region as recited in claim 28. Therefore, in the non-voltage region no voltage is applied to make a transition to a bend orientation, and thereby a splay orientation is maintained.

Claim 31 was rejected under 35 U.S.C. § 101, which rejection is obviated by the present response as claims 31 and 32 are herein canceled without prejudice.

Claims 1 and 30 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent Application Publication 2001/0020925 to Hattori et al. (herein "Hattori"). Claims 2, 17, 18, 28, 29, 31, and 32 were rejected under 35 U.S.C. § 103(a) as unpatentable over Hattori. Claims 2-16 were rejected under 35 U.S.C. § 103(a) as unpatentable over Hattori in view of U.S. Patent Application Publication 2002/0149549 to Ohta et al. (herein "Ohta"). Claims 20-

27 were rejected under 35 U.S.C. § 103(a) as unpatentable over Hattori in view of U.S. Patent Application Publication 2002/0145579 to Yamakita et al. (herein “Yamakita”). The above-noted prior art rejections are traversed by the present response as discussed next.

Each of the above-noted rejections relies on Hattori as the primary reference, but applicants respectfully submit the outstanding rejection is misconstruing the disclosures in Hattori relative to the claim features.

Independent claim 1 positively recites:

when an *off signal is output from the switch*, the driver applies a predetermined voltage which can be applied to each of pixels of the liquid crystal layer for a predetermined time and after the elapse of the predetermined time, *stops the supply of power* to the driver from the liquid-crystal driving power supply. (Emphasis added).

Independent claim 30 recites language also directed to providing an “OFF signal” and stopping a supply of power.

Applicants submit the outstanding rejection is misapplying Hattori as even the cited disclosures in Hattori are not directed to an operation when an *off signal* is output from a switch, but instead are directed to a power-supply *on sequence* when the main power of the liquid crystal display apparatus is switched *on*.

In further detail, the present invention can address problems that occur in a power-supply off sequence of a liquid crystal layer using OCD mode liquid crystal. As noted in the specification for example at page 3, lines 16-18, in such a device an image may not uniformly disappear from a display face depending on a display pattern, and thereby an uncomfortable feeling may occur to a user. As noted in the specification at page 5, lines 1-23, in a conventional power-supply off sequence, a portion to be quickly changed to a splay orientation and a portion to be slowly changed to the splay orientation are produced when changing from the bend orientation to the splay orientation among display screens after

turning off the power supply because the applied voltage of each voltage of the liquid crystal layer depends on an image display. Therefore, in the predetermined time until completely changing to the splay orientation after turning off the power supply, a portion of the liquid crystal layer is already changed to the splay orientation, but an orientation state still between the bend orientation and the splay orientation may occur in another portion. In that case, when an external light is strong, the difference between orientation states of various portions of the liquid crystal layer may be seen as an unevenness even if turning off a backlight.

Further, and as noted in the present specification at page 6, lines 1-6, when turning on the power supply again, in a time until completely changing to the splay orientation after turning off the power supply, a long transfer driving period of changing to the bend orientation is needed when the power supply is turned on and an excessive time is required until an image is displayed after turning on the power supply.

The claimed invention addresses such drawbacks recognized by the present inventors. To address such drawbacks, in the claimed invention when an *off signal is output from the switch*, the driver applies a predetermined voltage that can be applied to each of the pixels of the liquid crystal layer for a predetermined period of time. With such a claimed structure, and as noted in the present specification at page 26, line 24 to page 27, line 8, an unevenness does not occur at a portion of a splay orientation and a portion of a bend orientation after turning off the liquid crystal driving power supply, and unevenness is not seen on the display face even if the external light is strong, and further a period until an image is displayed after turning on the power supply again can be decreased because the second splay orientation is not present.

Applicants submit the outstanding rejection is misconstruing the teachings of Hattori as again Hattori is not directed to an operation such as claimed in independent claim 1 when an *off signal is output from the switch*.

With respect to the above-noted features, the outstanding rejection specifically cites Hattori at Figure 2 and paragraphs [0086]-[0089] and [0103].² However, at those noted portions Hattori is only directed to issues that occur when a power-supply *on* sequence of a OCB-LCD apparatus is executed. In that respect Hattori itself expressly states an operation “[w]hen a main power of the liquid crystal display apparatus 1 is switched *on*, . . .” (see paragraph [0088], emphasis added) and further “[w]hen a main power of the liquid crystal display apparatus is switched *on*, . . .” (see paragraph [0103], emphasis added). In such ways, Hattori is not at all directed to the above-noted claim features that can address unevenness/ununiform image on a display when a switch is turned off. Thereby, each of independent claims 1 and 30, and the claims dependent therefrom, are believed to clearly distinguish over Hattori.

Moreover, with respect to independent claim 28, applicants note as discussed above independent claim 28 clarifies “the non-voltage region” structure, which is also believed to be neither taught nor suggested by Hattori.

In view of the present response applicants respectfully submit each of independent claims 1, 28, and 30, and thereby the claims dependent therefrom, positively recite features neither taught nor suggested by Hattori, and thus are allowable over Hattori.

Moreover, no disclosures in any of the further cited references to Ohta or Yamakita were cited with respect to the above-noted features, and no disclosures in Ohta or Yamakita are believed to cure the above-noted deficiencies in Hattori.

² Office Action of February 7, 2008 the sentence bridging pages 4 and 5.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

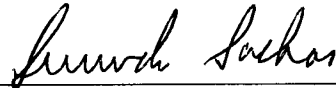
Respectfully submitted,

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